




May 23, 2001

**MEMORANDUM**

**TO:** Katherine B. Kelly, Administrator  
Air Quality Division

**FROM:** Zach Q. Klotovich, Air Quality Engineer   
State Technical Services Office

**THROUGH:** Shawnee Y. Chen, P.E., Staff Engineer   
State Technical Services Office

Daniel P. Salgado, Process Engineering Lead  
State Technical Services Office 

**SUBJECT:** *Technical Analysis for Final Tier I Operating Permit (#001-00101) Fiberglass Systems, Inc., Boise, Idaho*

PERMITTEE:	Fiberglass Systems, Inc. 4545 Enterprise Boise, Idaho 83705
PERMIT NO:	001-00101
STANDARD INDUSTRIAL CLASSIFICATION (SIC):	3079
DESCRIPTION:	Composites Fabrication Facility
KIND OF PRODUCTS:	Fabrication of Fiberglass Reinforced Plastic Composites
RESPONSIBLE OFFICIAL:	Gary Multanen, President
PERSON TO CONTACT:	Merrill Balias, Environmental Manager
TELEPHONE NO:	(208) 342-6823
# OF FULL-TIME EMPLOYEES:	
AREA OF OPERATION:	
FACILITY CLASSIFICATION:	A
COUNTY:	Ada
AIR QUALITY CONTROL REGION:	064
UTM COORDINATES:	564.4, 4823.0
EXACT PLANT LOCATION:	Latitude 43 31'41" Longitude 116 11' 56"

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## LIST OF ACRONYMS

ACFM	Actual Cubic Feet per Minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CFR	Code of Federal Regulations
CO	Carbon Monoxide
DEQ	Idaho Division of Environmental Quality
dscf	Dry Standard Cubic Feet
EF	Emission Factor
EPA	United States Environmental Protection Agency
gpm	Gallons per Minute
gr	Grain (1 lb = 7000 Grains)
HAPs	Hazardous Air Pollutants
IC	Integrated Chip
IDAPA	Idaho Administrative Procedures Act
km	Kilometer
lb/hr	Pound per Hour
MMBTU	Million British Thermal Unit
NESHAP	National Emission Standards for Hazardous Air Pollutants
NWP	Northwest Pipeline Corporation
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards
O <sub>3</sub>	Ozone
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter with an Aerodynamic Diameter of 10 Micrometer ( m) or Less
ppm	Parts per Million
PSD	Prevention of Significant Deterioration
PTC	Permit to Construct
SCC	Source Classification Code
scf	Standard Cubic Foot
SO <sub>2</sub>	Sulfur Dioxide
TSP	Total Suspended Particulates
T/yr	Tons per Year (1 Ton = 2000 lb)
m	Micrometers
VE	Visible Emissions
VOC	Volatile Organic Compound

**1. PURPOSE**

The purpose of this memorandum is to set out the legal and factual basis for the final Tier I Operating Permit (OP) in accordance with IDAPA 58.01.01.362, *Rules for the Control of Air Pollution in Idaho (Rules)*.

Idaho Department of Environmental Quality (DEQ) staff have reviewed the information provided by Fiberglass Systems, Inc., regarding the operation of their facility in Boise, Idaho. This information was submitted based on the requirements of the Tier I OP in accordance with Section 58.01.01.300 of the *Rules*.

**2. SUMMARY OF EVENTS**

On May 3, 1995, DEQ received the Tier I OP application from Fiberglass Systems for their fiberglass tub and shower manufacturing facility. The application was determined to be administratively complete on March 18, 1996. On May 17, 1999, DEQ received an application update from Fiberglass Systems. On February 3, 2000, DEQ issued an incompleteness letter to Fiberglass Systems because the update received on May 17, 1999 was not signed by the responsible official and the application materials did not include a list of applicable requirements. Responses to the incompleteness letter were received on March 3, 2000, and March 20, 2000. On April 28, 2000, DEQ determined the application update complete.

A public comment period was held from October 18, 2000 to November 17, 2000. No comments were received.

After the public comment period, EPA was sent the proposed OP and the technical memorandum for their 45-day review period. EPA did not provide any comments on the permit.

**3. BASIS OF THE ANALYSIS**

The following documents were relied upon in preparing this memorandum and the Tier I OP:

- a. Tier I Air Operating Permit Application, (May 3, 1995; May 17, 1999 update; March 3, 2000, update; March 20, 2000, update; Fiberglass Systems, Inc., Boise);
- b. Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, January 1995, Office of Air Quality Planning and Standards, United States Environmental Protection Agency;
- c. 40 CFR Part 70;
- d. Guidance developed by EPA and DEQ;
- e. Title V permits issued by other jurisdictions; and
- f. Documents and procedures developed in the Title V Pilot Operating Permit program.

#### 4. REGULATORY ANALYSIS – GENERAL FACILITY

##### 4.1 Facility Description

###### 4.1.1 General Process Description

Contact molding begins with the application of a mold release, which is applied depending on a number of process factors influencing part release. Finish surface material is applied, usually a pigmented polyester resin commonly referred to as gel-coat. The finish surface material is generally applied with spray equipment in a spray booth. Molds are then staged for the gel-coat to cure. The cure time varies depending on the ambient room temperature. Molds usually pass through the curing booth. Surface finish application is followed by application of gel-coat paste and barrier coat application. This step is usually omitted if the product does not require a high level of surface cosmetic quality. Molds are then routed to a series of three (3) fiberglass reinforced plastic (FRP) lamination application spray booths. An unfilled resin or a filled resin matrix is applied in each booth depending on the product and laminate specifications. In each laminate application, the curing takes place outside the spray booth at room temperature. After curing, the product is removed from the mold and proceeds to a trim booth where the edges are machined and cut to meet product specifications. After inspection and mold blem, or process defect repair, the product is crated for shipment. In the instance of jetted bathing units, they proceed to the plumbing area where PVC plumbing, pumps, and jets are attached prior to crating for shipment. Enclosed piping systems are used to facilitate movement of polyester resin and gel-coat from the mixing and storage rooms separated from the production floor. The polyester resin is primarily purchased and stored in bulk with some tote and drum purchases while the gel-coat is primarily purchased in drums with some tote and pail purchases. Inert fillers are purchased in pallet or truck quantities to mix with the resin solutions.

###### 4.1.2 Facility

This facility is a fiberglass tub and shower manufacturer, SIC (3079).

###### 4.1.3 Area Classification

Fiberglass Systems is located in Boise, Idaho, which is in Ada County. The Northern Ada County/Boise area is designated as nonattainment for carbon monoxides and attainment or unclassifiable for other criteria pollutants except PM-10. The designation for PM-10 is the subject of a settlement to a lawsuit. The settlement requires EPA to make a designation by September 30, 2003. Fiberglass Systems is located in AQCR 64 and UTM Zone 11.

###### 4.1.4 Permitting History

10/5/94	DEQ issues FSI an initial Permit to Construct No. 001-00101.
5/ 2/95	DEQ issues FSI a modified PTC that allowed an increase in operating hours.
12/18/98	DEQ issues FSI a modified PTC for a change in method of determining styrene emissions. Previously, FSI had limits on styrene content of gel-coats and resins. The modification allowed FSI to use a mass balance to determine styrene emissions.

- 6/25/99 DEQ issues FSI an amended PTC for the installation of a dust collection chamber that prevents particulate from trimming operations to escape. With this amendment, particulate limits were removed from the permit along with stacks J and D.
- 1/27/00 DEQ issues FSI an amended PTC for the relocation of the jetting shop to the main floor and the subsequent removal of stack L. Emissions did not change.
- 12/28/00 DEQ issues FSI a modified PTC for an increase in allowable methyl ethyl ketone (MEKP) peroxide emissions.

#### 4.2 Facility-Wide Applicable Requirements

Unless specified, the following requirements apply to all emission units at the facility.

##### 4.2.1 Permit Requirement - Fugitive Dust - (IDAPA 58.01.01.650-651 (5-1-95))

###### 4.2.1 (a) Applicable Requirement (permit condition 1.1)

Facility-Wide Condition 1.1 states that, all reasonable precautions shall be taken to prevent particulate matter from becoming airborne in accordance with IDAPA 58.01.01.650-651.

###### 4.2.1 (b) Compliance Demonstration (1.2, 1.3, 1.4)

Facility-wide Condition 1.2 states that the permittee is required to monitor and record the frequency and the methods used by the facility to reasonably control fugitive particulate emissions. IDAPA 58.01.01.651 gives some examples of ways to reasonably control fugitive emissions which include, use of water or chemicals, application of dust suppressants, use of control equipment, covering of trucks, paving of roads or parking areas, and removal of materials from streets.

Facility-wide Condition 1.3 requires that the permittee maintain records of all fugitive dust complaints received. In addition the permittee is required to take appropriate corrective action as expeditiously as practicable after a valid complaint is received. The permittee is also required to maintain a record which shall include the date that each complaint was received and a description of the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken and the date the corrective action was taken.

To ensure that the methods being used by the permittee to reasonably control fugitive particulate matter emissions whether or not a complaint is received, facility-wide condition 1.4 requires that the permittee conduct quarterly inspections of the facility. The main source of fugitive emissions is the parking lot, which is paved, so quarterly monitoring will be sufficient. The permittee is required to inspect potential sources of fugitive emissions during daylight hours and under normal operating conditions. If the permittee determines that the fugitive emissions are not being reasonably controlled the permittee shall take corrective action as expeditiously as practicable. The permittee is also required to maintain records of the results of each fugitive emission inspection.

Both Facility-wide Conditions 1.3 and 1.4 require the permittee to take corrective action as expeditiously as practicable. In general, the Department believes that taking corrective action within twenty-four hours of receiving a valid complaint or determining that fugitive particulate emissions are not being reasonably controlled meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

4.2.2 Permit Requirement - Odorous Gas, Liquids, or Solids - [IDAPA 58.01.01.775-776 (5-1-94)] (1.5)

4.2.2.(a) Applicable Requirement

Facility-wide Condition 1.5 and IDAPA 58.01.01.776 both state that: "No person shall allow, suffer, cause or permit the emission of odorous gases, liquids or solids to the atmosphere in such quantities as to cause air pollution." This condition is currently considered federally enforceable until such time it is removed from the SIP, at which time it will be a state-only enforceable requirement.

4.2.2.(b) Compliance Demonstration (1.6)

Facility-wide Condition 1.6 requires the permittee to maintain records of all odor complaints received. If the complaint has merit, the permittee is required to take appropriate corrective action as expeditiously as practicable. The log is required to contain the date that each complaint was received and a description of the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

Facility-wide Condition 1.6 requires the permittee to take corrective action as expeditiously as practicable. In general, the Department believes that taking corrective action within twenty-four hours of receiving a valid odor complaint meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

4.2.3 Permit Requirement - Visible Emissions - [IDAPA 58.01.01.625(4-23-99, T)]

4.2.3.(a) Applicable Requirement (1.7)

IDAPA 58.01.01.625 and Facility-wide Condition 1.7 state that "(No) person shall discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period which is greater than twenty percent (20%) opacity as determined . . ." by IDAPA 58.01.01.625. This provision does not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas are the only reason(s) for the failure of the emission to comply with the requirements of this rule.

4.2.3.(b) Compliance Demonstration (1.8)

To ensure reasonable compliance with the visible emission rule, Facility-wide Condition 1.8 requires that the permittee conduct routine visible emissions inspections of the facility. The permittee is required to inspect potential sources of visible emissions, during daylight hours and under normal operating conditions. If any visible emissions are present from any point of emission covered by this section, the permittee must take appropriate corrective action as expeditiously as practicable. If opacity is determined to be greater than twenty percent (20%) for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period, the permittee must take corrective action and report the exceedance in its annual compliance certification and in accordance with the excess emissions rules in IDAPA 58.01.01.130-136. The permittee is also required to maintain records of the results of each visible emissions inspection which must include the date of each inspection and a description of the permittee's assessment of the conditions existing at the time visible emissions are present, any corrective action taken in response to the visible emissions, and the date corrective action was taken.

It should be noted that if a specific emission unit has a specific compliance demonstration method for visible emissions that differs from Facility-wide Condition 1.8, then the specific compliance demonstration method overrides the requirement of Condition 1.8. Condition 1.8 is intended for small sources that would generally not have any visible emissions.

Facility-wide Condition 1.8 requires the permittee to take corrective action as expeditiously as practicable. In general, the Department believes that taking corrective action within twenty-four hours of discovering visible emissions meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

The reporting requirements shall be in accordance with conditions 1.9, 1.10, and GP.24 of the permit.

4.2.4 Permit Requirement - Excess Emissions - [IDAPA 58.01.01.130(11-13-98, T)]

4.2.4.(a) Applicable Requirement (1.9)

Facility-wide Condition 1.9 requires that the permittee comply with the requirements of IDAPA 58.01.01.130-136 for startup, shutdown, scheduled maintenance, safety measures, upset and breakdowns. This section is fairly self explanatory and no additional detail is necessary in this technical analysis. It should, however, be noted that subsections 133.02, 133.03, 134.04, and 134.05 are not specifically included in the permit as applicable requirements. These provisions of the *Rules* only apply if the Permittee anticipates requesting consideration under subsection 131.02 of the *Rules* to allow the Department to determine if an enforcement action to impose penalties is warranted. Section 131.01 states "... The owner or operator of a facility or

*emissions unit generating excess emissions shall comply with Sections 131, 132, 133.01, 134.01, 134.02, 134.03, 135, and 136, as applicable. If the owner or operator anticipates requesting consideration under Subsection 131.02, then the owner or operator shall also comply with the applicable provisions of Subsections 133.02, 133.03, 134.04, and 134.05." Failure to prepare or file procedures pursuant to Sections 133.02 and 134.04 is not a violation of the Rules in and of itself, as stated in subsections 133.03.a and 134.06.b. Therefore, since the Permittee has the option to follow the procedures in Subsections 133.02, 133.03, 134.04, and 134.05; and is not compelled to, the subsections are not considered applicable requirements for the purpose of this permit and are not included as such.*

4.2.4.(b) Compliance Demonstration

The compliance demonstration is contained within the text of facility-wide condition 1.9. No further clarification is necessary here.

4.2.5 Permit Requirement - Periodic Compliance Certifications - [IDAPA 58.01.322.11 (5-1-94)] (Permit Condition 1.10)

All periodic reports and certifications required by this permit shall be submitted within thirty (30) days of the end of each specified reporting period to the appropriate DEQ and EPA Regional Office.

4.2.6 Permit Requirement - Rules for Control of Open Burning - [IDAPA 58.01.01.600-619, (5/1/94)] (Permit Condition 1.12)

All open burning shall be done in accordance with IDAPA 58.01.01.600-616.

4.2.7 Permit Requirement - Asbestos - [40 CFR 61 Subpart M] (Permit Condition 1.13)

The permittee shall comply with all applicable portions of 40 CFR Part 61, Subpart M when conducting any renovation or demolition activities at the facility.

4.2.8 Permit Requirement - Risk Management Plan - [40 CFR 68.215(a)(2); IDAPA 58.01.01.322.11.(5/1/94); 40 CFR 70.6(c)(5)] (Permit Condition 1.14)

Any facility that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115 must comply with the requirements of the Chemical Accident Prevention Provisions at 40 CFR Part 68 no later than the latest of the following dates:

Three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR 68.130; or

The date on which a regulated substance is first present above a threshold quantity in a process.

This facility is not currently subject to the requirements of 40 CFR Part 68. However, should the facility ever become subject to the requirements of 40 CFR Part 68 then it must comply with the provisions contained in 40 CFR Part 68 by the time listed above.

#### 4.3 Testing Method (Permit Condition 1.15)

No source test is required in this permit. However, testing methods for each emission limit are listed in the permit in accordance with EPA's comments as follows below. If any testing is required by this permit, it shall be conducted in accordance with the procedures in IDAPA 58.01.01.157.

**Test methods and Averaging Times:** The specific reference test method and averaging times for each emission limit must be identified in the permit. A reference test method must be identified even if no source testing requirement is imposed by the permit. Please note that, although we are aware that the State rules have recently been revised to include averaging times and test methods for most emission limits, the revised version of the Rules will not have been approved into the SIP at the time of issuance of the first permits.

##### 4.3.1 Opacity

The opacity shall be determined by procedures contained in IDAPA 58.01.01.625 (4-23-99). For NSPS-affected sources, EPA Reference Method 9 shall be used.

##### 4.3.2 PM/PM<sub>10</sub>

EPA Reference Method 201A, or a Department-approved testing method, shall be used to test PM/PM<sub>10</sub> emissions. The averaging time comes from EPA Reference Method 201A.

##### 4.3.3 CO

EPA Reference Method 10, or a Department-approved testing method, shall be used to test CO emissions. The averaging time comes from EPA Reference Method 10.

##### 4.3.4 SO<sub>2</sub>

EPA Reference Method 6, or a Department-approved testing method, shall be used to test SO<sub>2</sub> emissions. The averaging time comes from EPA Reference Method 6.

##### 4.3.5 NO<sub>x</sub>

EPA Reference Method 7, or a Department-approved testing method, shall be used to test NO<sub>x</sub> emissions. The averaging time comes from EPA Reference Method 7.

##### 4.3.6 VOCs

EPA Reference Method 25, or a Department-approved testing method, shall be used to test VOC emissions. The averaging time comes from EPA Reference Method 25.

#### 4.4 HAPs

FSI is a major source of HAP emissions. FSI is permitted to emit 253.9 tons per year (T/yr) of styrene and 0.079 T/yr of methylene chloride. In addition, FSI emits the following HAPs in amounts below the screening emission levels:

N,N-Dimethylaniline  
Xylene  
Ethyl benzene  
Methyl ethyl ketone  
Dimethyl phthalate  
Cumene  
Toluene  
Ethylene glycol  
Methanol  
Methyl isobutyl ketone

#### 4.5 Alternative Operating Scenarios

No alternative operating scenarios have been requested by the Permittee.

#### 4.6 Trading Scenarios

The Permittee has not requested to trade any emissions.

#### 4.7 Nonapplicable Requirements

The following requirements were determined to be nonapplicable:

40 CFR 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

FSI does not have steam generating units that are large enough to meet the applicability requirements.

40 CFR 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

FSI does not have steam generating units large enough to meet the applicability requirements.

40 CFR 60 Subparts K, Ka, and Kb - Standards of Performance for Storage Vessels for Petroleum Liquids and Volatile Organic Liquid Storage Vessels

FSI does not have any tanks with capacity large enough to trigger the requirements of these subparts.

Particulate Matter - Process Equipment Emission Limitations On or After July 1, 2000 - [IDAPA 58.01.01.710 (6/23/00)]

The process equipment emission limitation of 0.2 gr/dscf does not apply to the stacks venting the area source because particulate matter emissions are at all times less than or equal to one pound per hour (IDAPA 58.01.01.710.02). FSI stated in their application that particulate emissions from the facility were "negligible" now that the trimming booth is no longer vented outside.

#### 4.8 Affected States Notice and Review

The State of Oregon is within fifty (50) miles of the facility. Oregon is an "affected state" as defined by IDAPA 58.01.01.008.02. Affected states receive a copy of the public comment package as required by IDAPA 58.01.01.364.02, and are provided the

opportunity to comment on the draft Tier I OP as provided by 40 CFR 70. No comments were received from Oregon.

## 5. REGULATORY ANALYSIS - EMISSIONS UNITS

### 5.1 EU1 - Area Source (Stacks A, B, E, F, G, H, I, and K)

#### 5.1.1 Emission Unit Description

These stacks are treated as an area source since they all vent the plant floor. VOCs are emitted from various stages of production in different areas of the plant floor, so it is not possible to associate specific emissions with individual stacks.

Stack ID	Description	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (F)
A	Gel Coat Booth	27	2.83	13,800	77
B	Gel Coat Booth	27	3.50	24,400	77
E	Mat and Patch	29	2.83	13,800	77
F	Skin Booth	29	3.50	24,400	77
G	Custom Fab	29	3.50	24,400	77
H	Hydrate Lam	29	2.83	13,800	77
I	Hydrate Lam (Custom)	29	3.50	24,400	77
K	Custom Fab Trim	27	2.83	24,400	77

#### 5.1.2 Permit Requirement - [PTC No. 001-00101, Section 2.1, Appendix A, December 28, 2000]

##### 5.1.2.(a) Applicable Requirement (Permit Condition 2.1)

Volatile organic compounds (VOCs) from the corresponding stacks or as fugitives shall not exceed the pound per month and ton per year values in Table 2.2.

##### 5.1.2.(b) Compliance Demonstration (Permit Conditions 2.8, 2.9)

The Permittee shall calculate, on a monthly basis, the monthly amount of VOCs emitted from the facility using the following method. The Permittee shall calculate amount of VOCs contained in each gel-coat, resin, styrene, paint, and adhesive by multiplying the weight of each gel-coat, resin, styrene, paint, or adhesive used during the month by the weight percent (%wt) VOC contained in the gel-coat, resin, styrene, paint, or adhesive. The Permittee shall then sum the total weight of VOC used in each gel-coat, resin, styrene, paint, and adhesive. This total, not including any styrene bound up in the product, shall equal the total VOCs emitted from the facility for the month, and shall not exceed the emission limits listed in Table 2.2 of this permit. The Permittee shall use the equation listed in Appendix A for this

calculation in order to demonstrate compliance with the monthly VOC emissions limit.

The Permittee shall calculate, on a monthly basis, the VOC emissions from the facility for the previous consecutive 12-month period using the following method. The Permittee shall sum the monthly VOC emissions, as determined in Section 2.4 of this permit, for the previous 12-month period, and divide this number by 2,000 to convert to tons per year. The Permittee shall use the equation listed in Appendix A for this calculation in order to show compliance with the annual VOC emissions.

5.1.2.(c) Monitoring (Permit Condition 2.5)

The Permittee shall maintain records which contains, but is not limited to, the following information: the name and identification number for each gel-coat, resin, adhesive, catalyst, paint, promoter, styrene, and wax used; the VOC, styrene, benzoyl peroxide, dichloromethane, and methyl ethyl ketone peroxide percent by weight of each compound; and gallons and pounds of gel-coat, resin, adhesive, catalyst, paint, promoter, styrene, and wax used.

5.1.2.(d) Testing

None required.

5.1.2.(e) Recordkeeping (Permit Condition 2.5)

To verify information contained in the log, the Permittee shall maintain all manufacturer/supplier specifications for each product used, as well as delivery receipts specifying amounts of materials received at the facility. The records shall be kept on site for five (5) years and shall be made available to DEQ representatives upon request.

The PTC requires records to be kept for a period of two (2) years but was changed to five (5) years in accordance with IDAPA 58.01.01.322.07.c.

5.1.2.(f) Reporting (Permit Condition 2.10)

The Permittee shall submit to DEQ annually a report which includes, but is not limited to: the amount of gel-coat and resin used in tons per any consecutive 12-month period (T/yr); the maximum styrene content of gel-coat used; the weighted average styrene content of gel-coat and resin used; and calculated VOC, styrene, benzoyl peroxide, dichloromethane, and methyl ethyl ketone peroxide emissions.

5.1.3 Permit Requirement - [PTC No. 001-00101, Section 2.2, Appendix A, December 28, 2000]

5.1.3.(a) Applicable Requirement (Permit Condition 2.2)

Toxic emissions of styrene, methylene chloride, and methyl ethyl ketone peroxide (MEKP) from the corresponding stacks or as

fugitives shall not exceed the pound per month and ton per year values in Table 2.2.

5.1.3.(b) Compliance Demonstration (Permit Conditions 2.6, 2.7)

The Permittee shall calculate, on a monthly basis, the monthly amount of styrene emitted from the facility utilizing the following method. For each product containing styrene, the Permittee shall determine the weight percent content of styrene and the amount of that product used each month for each specific application method. The Permittee shall then use the table in Appendix A of the permit to determine an emission factor for the product and associated application method. (These emission factor tables come from the Composite Fabricators Association (CFA) and were accepted by DEQ in the PTC. The CFA emission factors were determined to be more accurate than AP-42 emission factors.) The factor shall then be multiplied by the total monthly amount of product used in that application method. This procedure shall be followed for each product and for each method in which that product is applied. The total facility styrene emissions shall then be calculated by summing the emissions for each product-method combination. The total monthly styrene emissions shall not exceed the limits listed in Table B.2. An example of how this calculation is to be conducted is provided following the table in Appendix A of the permit.

The Permittee shall calculate, on a monthly basis, the styrene emissions from the facility for the previous consecutive 12-month period using the following method: The Permittee shall sum the monthly styrene emissions, as determined by the method described in Section B.6 of this permit, for the previous twelve 12-month period and divide this number by 2,000 to convert to tons per any consecutive 12-month period (T/yr).

5.1.3.(c) Monitoring (Permit Condition 2.5)

The Permittee shall maintain records which contains, but is not limited to, the following information: the name and identification number for each gel-coat, resin, adhesive, catalyst, paint, promoter, styrene, and wax used; the VOC, styrene, benzoyl peroxide, dichloromethane, and methyl ethyl ketone peroxide percent by weight of each compound; and gallons and pounds of gel-coat, resin, adhesive, catalyst, paint, promoter, styrene, and wax used. To verify information contained in the log, the Permittee shall maintain all manufacturer/supplier specifications for each product used as well as delivery receipts specifying amounts of materials received at the facility.

5.1.3.(d) Testing

None required.

5.1.3.(e) Recordkeeping (Permit Condition 2.5)

The PTC requires records to be kept for two (2) years, but FSI will now be required to keep records for five (5) years in accordance with IDAPA 322.07.c.

5.1.3.(f) Reporting (Permit Condition 2.10)

The Permittee shall submit to DEQ annually a report which includes, but is not limited to: the amount of gel-coat and resin used in tons per any consecutive 12-month period (T/yr); the maximum styrene content of gel-coat used; the weighted average styrene content of gel-coat and resin used; and calculated VOC, styrene, benzoyl peroxide, dichloromethane, and methyl ethyl ketone peroxide emissions.

5.1.4 Permit Requirement - [IDAPA 58.01.01.625, PTC No. 001-00101, Section 2.3, December 28, 2000]

5.1.4.(a) Applicable Requirement (Permit Condition 2.3)

Visible emissions from each stack shall not exceed twenty percent (20%) opacity for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period in accordance with IDAPA 58.01.01.625 (Rules for the Control of Air Pollution in Idaho).

5.1.4.(b) Compliance Demonstration (Permit Condition 2.4)

Stacks A, B, E, F, G, H, I, and K shall be equipped with both Binks, or Protectaire filters, and Purolator pre-filter pads to minimize particulate emissions. The efficiency of the filters shall be no less than eighty-four percent (84%) for particulate matter (PM) and the efficiency of the pads shall be no less than seventy-two percent (72%) for PM-10.

5.1.4.(c) Monitoring (Permit Condition 1.8)

The permittee shall perform a monthly visible emissions inspection of stacks A, B, E, F, G, H, I, and K.

5.1.4.(d) Testing

None required.

5.1.4.(e) Recordkeeping (Permit Condition 1.8)

The permittee shall maintain records of the results of each monthly visible emission inspection. The log shall, at a minimum, include the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed) and any corrective action taken in response to the visible emissions.

5.1.4.(f) Reporting (General Provision 24)

The Permittee shall report all deviations at least once every six (6) months in accordance with IDAPA 58.01.01.322.08.b and c.

5.1.5 Permit Requirement - [IDAPA 58.01.01.650, 651: PTC No. 001-00101, Section 2.4, December 28, 2000]

5.1.5.(a) Applicable Requirement (Permit Condition 2.13)

All reasonable precautions shall be taken to prevent particulate matter from becoming airborne in accordance with IDAPA 58.01.01.650 and .651.

5.1.5.(b) Compliance Demonstration (Permit Condition 2.14)

The door to the mixing tank room shall remain closed while extenders and fillers are being added to the resin matrix.

5.1.5.(c) Monitoring (Permit Condition 2.15)

The permittee shall note whether the door is open or closed each time extenders or fillers are added to the resin matrix.

5.1.5.(d) Testing

None required.

5.1.5.(e) Recordkeeping (Permit Condition 2.15)

Each time that extenders or fillers are added to the resin matrix the Permittee shall record the date and time of the mixing along with the position of the door (i.e., open or closed).

5.1.5.(f) Reporting (General Provision 24)

The Permittee shall report all deviations at least once every six (6) months in accordance with IDAPA 58.01.01.322.08.b and c.

5.1.6 Permit Requirement - [PTC No. 001-00101, Section 2.5, December 28, 2000]

5.1.6.(a) Applicable Requirement (Permit Condition 2.16)

All reasonable precautions shall be taken to minimize fugitive VOC emissions due to cleanup of various containers, acetone/solvent reclaiming, batch mixing, bulk tank filter clean out, and patch mixing.

5.1.6.(b) Compliance Demonstration Method (Permit Conditions 2.17, 2.18)

The permittee shall conduct a quarterly facility-wide fugitive VOC emission inspection of potential sources of fugitive VOC emissions, under normal operating conditions to ensure that the methods used to reasonably control fugitive VOC emissions are effective. If fugitive VOC emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each quarterly fugitive VOC emission inspection. The log shall, at a minimum, include the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive VOC emissions are present, any corrective action taken in response to

the fugitive VOC emissions, and the date the corrective action was taken.

Low-volume, low-pressure spray guns shall be used throughout the facility for gel-coat applications.

**5.1.7 Permit Requirement - Particulate Matter - New Equipment Process Weight Limitations - (IDAPA 58.01.01.701 (4/5/00)) (Permit Condition 2.19)**

**5.1.7(a) Applicability**

The new equipment process weight limitation in IDAPA 58.01.01.701 is applicable to the area source stacks until the particulate matter standard in IDAPA 58.01.01.710 is accepted into the State Implementation Plan (SIP) by EPA. Once the particulate matter standard in IDAPA 58.01.01.710 is approved by EPA, the process weight limitation will no longer be an applicable standard.

**5.1.7(b) Compliance Demonstration (Permit Conditions 2.11, 2.12)**

FSI trims edges from the showers and bathtubs inside a booth that recirculates air from the booth through a filter bank and back into the booth. Since air is not exhausted to the atmosphere, particulate emissions from the trim booth are considered nonexistent.

In lieu of a compliance demonstration, FSI gave this response to the process weight requirement: "Since process weight limitations only apply to particulate emissions, and since particulate emissions are negligible at this facility, these calculations become mute (sic)."

Because particulate emissions from FSI's facility are minimal, they are considered in compliance with the process weight standard. According to FSI, all trimming is done within the trim booth because the particulate from trimming must be controlled to prevent interference with the spraying operations.

The Permittee shall have developed, and make available to DEQ representatives upon request, an Operation and Maintenance (O&M) Manual for the dust chamber that describes the procedures that will be followed to comply with General Provision 28 and the manufacturer's air pollution control device specifications. The O&M manual shall include, but not be limited to, the following provisions:

- 2.11.1 Inspect the filters weekly for collapse.
- 2.11.2 Replace filters when collapsed or otherwise not functioning properly.
- 2.11.3 Inspect the dust chamber weekly to ensure that it is reasonably tight.
- 2.11.4 Remove accumulated particulate from the dust chamber weekly.

The O&M Manual must be made available to DEQ representatives upon request.

5.1.7.(c) Monitoring (Permit Condition 2.11)

The Permittee must inspect the filters and dust chambers weekly.

5.1.7.(d) Testing

None required.

5.1.7.(e) Recordkeeping (Permit Condition 2.12)

The Permittee shall develop, maintain, and make available to DEQ representatives upon request, records which contain, but is not limited to, the following information:

2.12.1 Filter inspection.

2.12.2 Filter replacement.

2.12.3 Dust chamber inspection.

2.12.4 Particulate removal.

5.1.7.(f) Reporting

The PTC requires submittal of the Dust Chamber O&M manual (Section 4.4) and a sample Dust Chamber log (Section 4.1). Both of these requirements are one-time requirements and have been fulfilled so they are not included in the Tier I permit.

**6. INSIGNIFICANT ACTIVITIES**

The following activities/sources have been declared insignificant in accordance with IDAPA 58.01.01.317.01(b)(i) based upon size or production rate:

Description	Insignificant Activities IDAPA Citation Section 317.01(b)(i)
Welding not using more than one (1) ton per day of welding rod	9
Storage and handling of water based lubricants for metal working where the organic content of the lubricant is less than ten percent (10%)	27
Combustion sources, less than five million (5,000,000) Btu/hr, exclusively using natural gas	5

**7. COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION**

7.1 Compliance Plan

The Permittee must submit a compliance plan that meets the requirements of IDAPA 58.01.01.322.12. The compliance plan is addressed by General Provision 20 as follows:

- a. For each applicable requirement for which the source is not in compliance, the Permittee shall comply with the compliance schedule incorporated in this permit.
- b. For each applicable requirement that will become effective during the term of this permit and that provides a detailed compliance schedule, the Permittee shall comply with such requirements in accordance with the detailed schedule.
- c. For each applicable requirement that will become effective during the term of this permit that does not contain a more detailed schedule, the Permittee shall meet such requirements on a timely basis.
- d. For each applicable requirement with which the Permittee is in compliance, the Permittee shall continue to comply with such requirements.

[IDAPA 58.01.01.322.10; IDAPA 58.01.01.314; 40 CFR 70.6(c)(3) and (4)]

## 7.2 Compliance Certification

Compliance certifications are addressed by General Provision 21 in the permit as follows:

The Permittee shall submit compliance certifications during the term of the permit for each emissions unit to the Department and the EPA as follows:

- a. Compliance certifications for all emissions units shall be submitted annually, or more frequently if specified by the underlying applicable requirement or elsewhere in this permit by the Department;
- b. The compliance certification for each emissions unit shall address all of the terms and conditions contained in the Tier I operating permit that are applicable to such emissions unit including emissions limitations, standards and work practices;
- c. The compliance certification shall be in an itemized form providing the following information (provided that the identification of applicable information may cross-reference the permit or previous reports as applicable):
  - i. The identification of each term or condition of the Tier I operating permit that is the basis of the certification;
  - ii. The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the methods and means required by this Tier I operating permit. If necessary, the owner or operator shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the CAA which prohibits knowingly making a false certification or omitting material information;
  - iii. The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in paragraph 21.c.ii above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred;
  - iv. Such other facts as the Department may require to determine the compliance status of the source.

- d. All original compliance certifications shall be submitted to the Department and a copy of all compliance certifications shall be submitted to the EPA.

[IDAPA 58.01.01.322.11; 40 CFR § 70.6(c)(5)(iii) as amended,  
62 Fed. Reg. 54900, 54946 (October 22, 1997); 40 CFR § 70.6(c)(5)(iv)]

**8. REGISTRATION FEES**

IDAPA 58.01.01.525 applies to this facility. Fiberglass Systems shall determine annual emissions in a manner consistent with IDAPA 58.01.01.525 for the purposes of registration fees. DEQ received payment of Fiberglass Systems fees for the second half of 2000, on July 27, 2000.

**9. AIRS FACILITY SUBSYSTEM**

No update to the AIRS Facility Subsystem is required.

**10. RECOMMENDATION**

Based on the Tier I OP application and review of the federal regulations and state rules, DEQ staff recommends that DEQ issue a final Tier I OP to Fiberglass Systems for their fiberglass tub and shower manufacturing facility in Boise, Idaho.

ZQK/bm T075/0402

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